

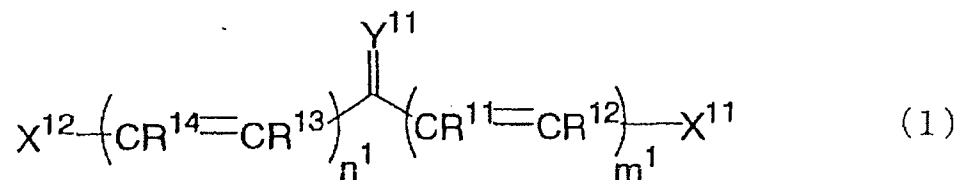
AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

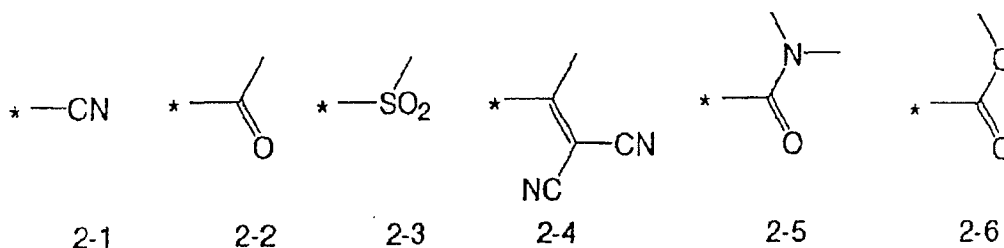
LISTING OF CLAIMS:

1-11. (canceled).

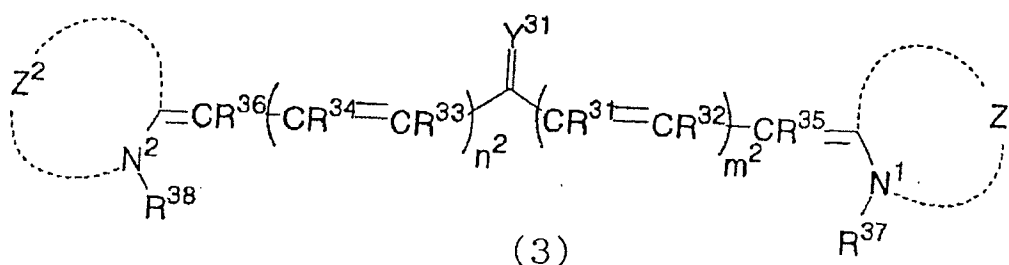
12. (previously presented): A method for inducing a non-resonant two-photon absorption, which comprises irradiating the compound represented by the following formula (1) or (3) with laser beams having a wavelength longer than the linear absorption band of the compound to induce a two-photon absorption:



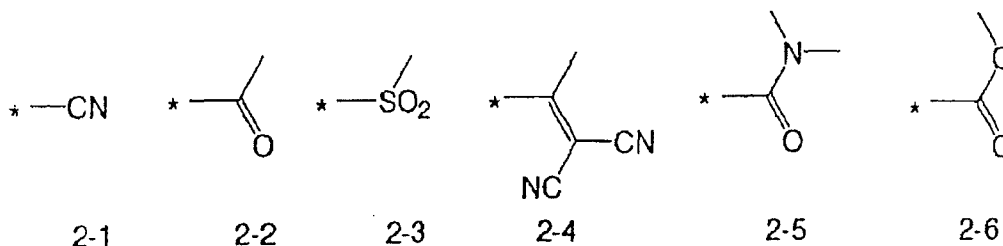
wherein R^{11} , R^{12} , R^{13} and R^{14} each independently represents a hydrogen atom or a substituent, and some of R^{11} , R^{12} , R^{13} and R^{14} may be bonded to each other to form a ring; m^1 and n^1 each represents an integer of from 0 to 4, and when m^1 and n^1 each represents 2 or more, a plurality of R^{11} , R^{12} , R^{13} and R^{14} may be the same or different; X^{11} and X^{12} , which may be the same or different, each represents a substituted or unsubstituted aryl group, or a substituted or unsubstituted heterocyclic group; Y^{11} represents an atomic group containing at least one of partial structures represented by the following formulae (2-1) to (2-6):



wherein * represents the bonding position in Y^{11} , when Y^{11} contains two of partial structures represented by formulae (2-1) to (2-6), the two partial structures may be different from each other, and may be bonded to form a ring, and when Y^{11} contains one of partial structure represented by formulae (2-1) to (2-6), other necessary atom or atomic group may be arbitrary;

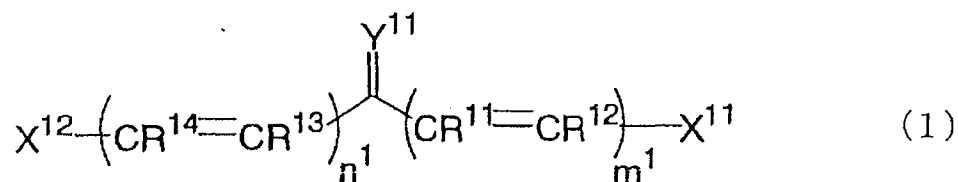


wherein R^{31} , R^{32} , R^{33} , R^{34} , R^{35} and R^{36} each independently represents a hydrogen atom or a substituent, and some of R^{31} , R^{32} , R^{33} , R^{34} , R^{35} and R^{36} may be bonded to each other to form a ring; m^2 and n^2 each represents an integer of from 1 to 4, and when m^2 and n^2 each represents 2 or more, a plurality of R^{31} , R^{32} , R^{33} and R^{34} may be the same or different; R^{37} and R^{38} each represents a hydrogen atom, an alkyl group, an alkenyl group, an aryl group, or a heterocyclic group; Z^1 and Z^2 each represents an atomic group to form a 5- or 6-membered ring; Y^{31} represents an oxygen atom, or an atomic group containing at least one of partial structures represented by the following formulas (2-1) to (2-6):



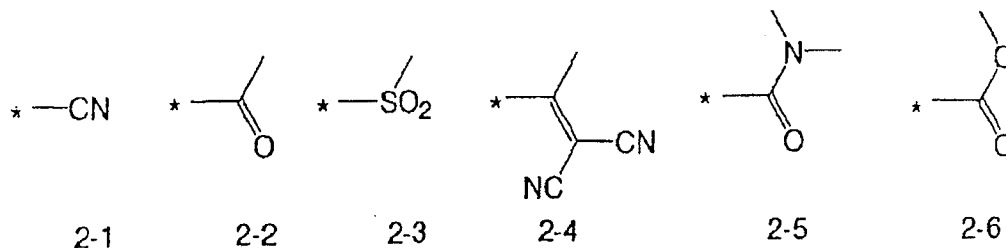
wherein * represents the bonding position in Y^{31} , when Y^{31} contains two of partial structures represented by formulae (2-1) to (2-6), the two partial structures may be different from each other, and may be bonded to form a ring, and when Y^{31} contains one of partial structure represented by formulae (2-1) to (2-6), other necessary atom or atomic group may be arbitrary.

13. (previously presented): A method for generating an emission of non-resonant two-photon, which comprises irradiating the compound represented by the following formula (1) or (3) with laser beams having a wavelength longer than the linear absorption band of the compound to induce non-resonant two-photon absorption and generate an emission:

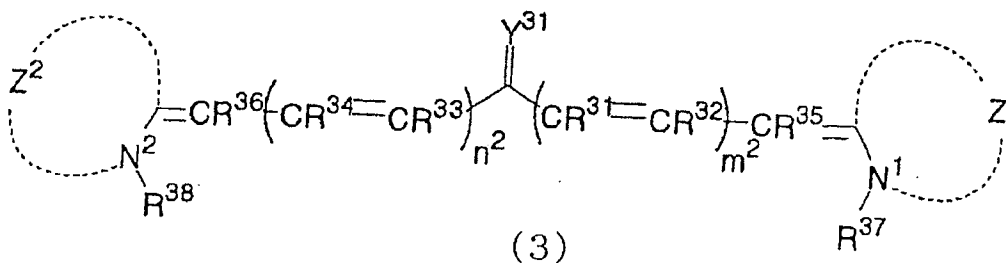


wherein R^{11} , R^{12} , R^{13} and R^{14} each independently represents a hydrogen atom or a substituent, and some of R^{11} , R^{12} , R^{13} and R^{14} may be bonded to each other to form a ring; m^1 and n^1 each represents an integer of from 0 to 4, and when m^1 and n^1 each represents 2 or more, a plurality of R^{11} , R^{12} , R^{13} and R^{14} may be the same or different; X^{11} and X^{12} , which may be the

same or different, each represents a substituted or unsubstituted aryl group, or a substituted or unsubstituted heterocyclic group; Y^{11} represents an atomic group containing at least one of partial structures represented by the following formulae (2-1) to (2-6):

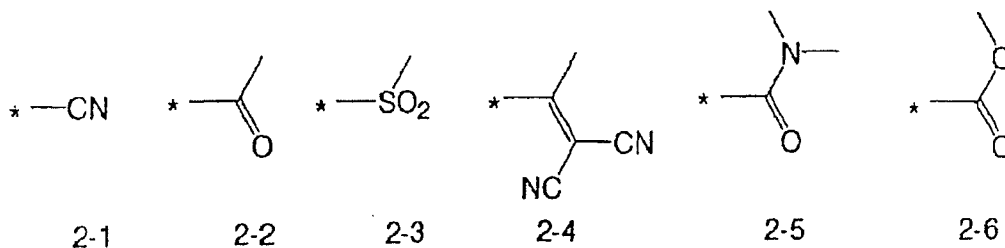


wherein * represents the bonding position in Y^{11} , when Y^{11} contains two of partial structures represented by formulae (2-1) to (2-6), the two partial structures may be different from each other, and may be bonded to form a ring, and when Y^{11} contains one of partial structure represented by formulae (2-1) to (2-6), other necessary atom or atomic group may be arbitrary;



wherein R^{31} , R^{32} , R^{33} , R^{34} , R^{35} and R^{36} each independently represents a hydrogen atom or a substituent, and some of R^{31} , R^{32} , R^{33} , R^{34} , R^{35} and R^{36} may be bonded to each other to form a ring; m^2 and n^2 each represents an integer of from 1 to 4, and when m^2 and n^2 each represents 2 or more, a plurality of R^{31} , R^{32} , R^{33} and R^{34} may be the same or different; R^{37} and R^{38} each represents a hydrogen atom, an alkyl group, an alkenyl group, an aryl group, or a heterocyclic group; Z^1 and Z^2 each represents an atomic group to form a 5- or 6-membered ring; Y^{31}

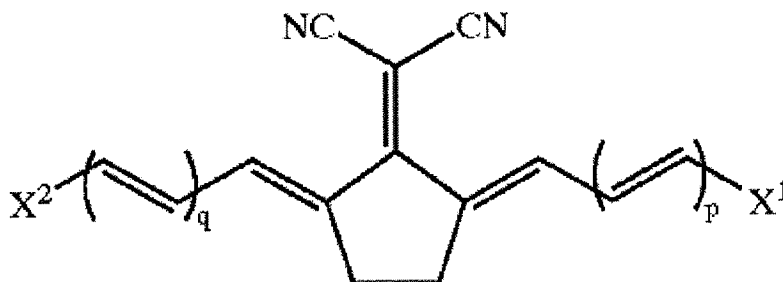
represents an oxygen atom, or an atomic group containing at least one of partial structures represented by the following formulas (2-1) to (2-6):



wherein * represents the bonding position in Y^{31} , when Y^{31} contains two of partial structures represented by formulae (2-1) to (2-6), the two partial structures may be different from each other, and may be bonded to form a ring, and when Y^{31} contains one of partial structure represented by formulae (2-1) to (2-6), other necessary atom or atomic group may be arbitrary.

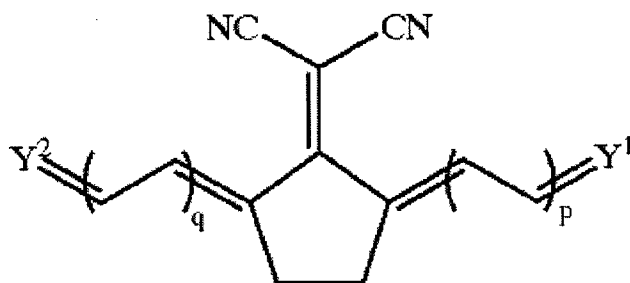
14-17. (canceled).

18. (previously presented): The method for inducing a non-resonant two-photon absorption of claim 12, wherein the compound represented by formula (1) or (3) has the following structure:



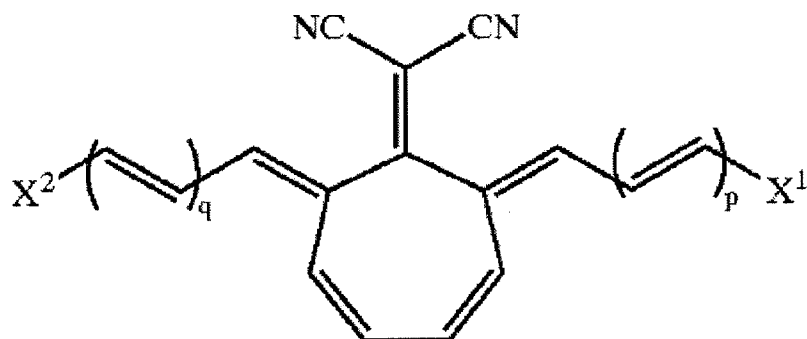
wherein X^1 and X^2 , which may be the same or different, each represents a substituted or unsubstituted aryl group or a substituted or unsubstituted heteroaryl group and p and q each represents an integer of from 1 to 3.

19. (previously presented): The method for inducing a non-resonant two-photon absorption of claim 12, wherein the compound represented by formula (1) or (3) has the following structure:



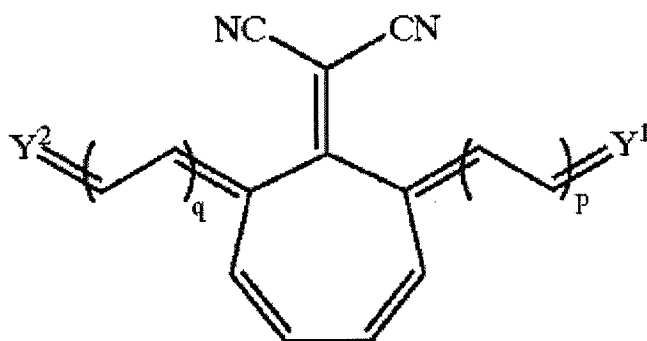
wherein Y^1 and Y^2 , which may be the same or different, each represents a substituted or unsubstituted aryl group or a substituted or unsubstituted heteroaryl group and p and q each represents an integer of from 1 to 3.

20. (previously presented): The method for inducing a non-resonant two-photon absorption of claim 12, wherein the compound represented by formula (1) or (3) has the following structure:



wherein X¹ and X², which may be the same or different, each represents a substituted or unsubstituted aryl group or a substituted or unsubstituted heteroaryl group and p and q each represents an integer of from 1 to 3.

21. (previously presented): The method for inducing a non-resonant two-photon absorption of claim 12, wherein the compound represented by formula (1) or (3) has the following structure:



wherein Y¹ and Y², which may be the same or different, each represents a substituted or unsubstituted aryl group or a substituted or unsubstituted heteroaryl group and p and q each represents an integer of from 2 to 3.

22. (new): The method according to claim 12, wherein the compound of formula (1) or (3) is a merocyanine compound.

23. (new): The method according to claim 13, wherein the compound of formula (1) or (3) is a merocyanine compound.